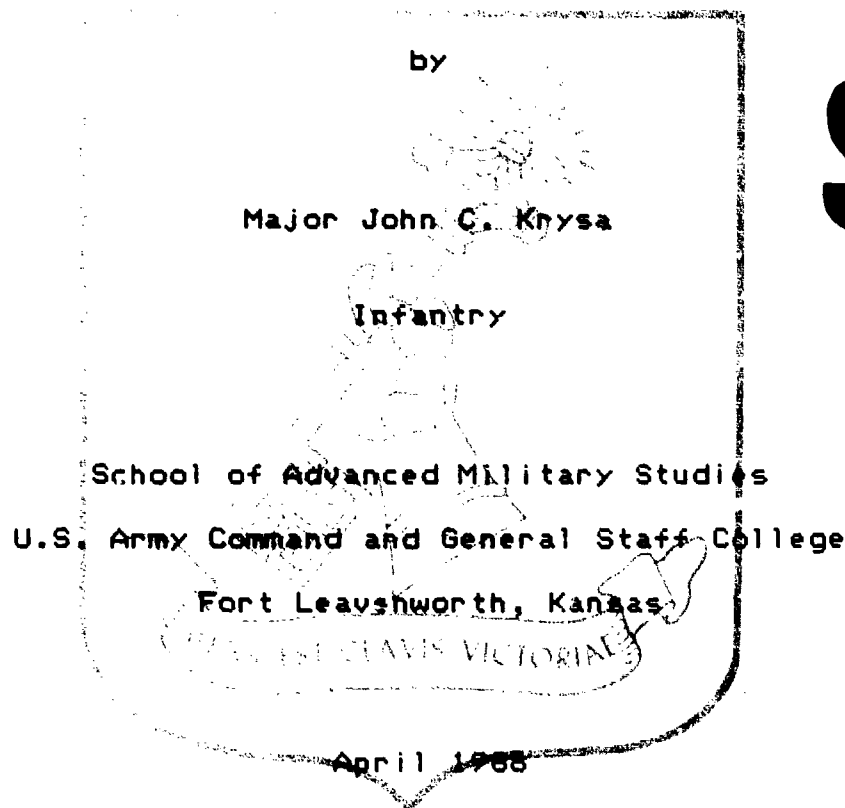


DTIC FILE COPY

2

AD-A195 453

OPERATIONAL PLANNING IN THE NORMANDY CAMPAIGN 1944



DTIC
ELECTE
JUL 20 1988
S D.

Approved for public release, distribution is unlimited.

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
1a. REPORT SECURITY CLASSIFICATION Unclassified			1b. RESTRICTIVE MARKINGS		
2a. SECURITY CLASSIFICATION AUTHORITY			3. DISTRIBUTION / AVAILABILITY OF REPORT approved for public release; distribution unlimited		
2b. DECLASSIFICATION / DOWNGRADING SCHEDULE			5. MONITORING ORGANIZATION REPORT NUMBER(S)		
4. PERFORMING ORGANIZATION REPORT NUMBER(S)			7a. NAME OF MONITORING ORGANIZATION		
6a. NAME OF PERFORMING ORGANIZATION School of Advanced Military Studies. USACGSC		6b. OFFICE SYMBOL (If applicable) ATZL-SWV	7b. ADDRESS (City, State, and ZIP Code)		
6c. ADDRESS (City, State, and ZIP Code) ATTN: ATZL-SWV FT. Leavenworth, KS 66027-6900			9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER		
8a. NAME OF FUNDING / SPONSORING ORGANIZATION		8b. OFFICE SYMBOL (If applicable)	10. SOURCE OF FUNDING NUMBERS		
8c. ADDRESS (City, State, and ZIP Code)		PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.	WORK UNIT ACCESSION NO.
11. TITLE (Include Security Classification) Operational Planning in the Normandy Campaign 1944					
12. PERSONAL AUTHOR(S) MAJOR John C. Krysa, USA					
13a. TYPE OF REPORT Monograph		13b. TIME COVERED FROM _____ TO _____		14. DATE OF REPORT (Year, Month, Day) 88/04	
15. PAGE COUNT 43					
16. SUPPLEMENTARY NOTATION					
17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)		
FIELD	GROUP	SUB-GROUP	Operational Planning, Maneuver, Logistics, Operational Sustainment, Campaign Plan, Normandy Invasion		
19. ABSTRACT (Continue on reverse if necessary and identify by block number) This monograph examines the planning and preparations for the cross-channel invasion of France by joint and combined forces. It illustrates the dependence of operational maneuver upon operational logistics considerations in a campaign of considerable complexity and uncertainty. →/2 p. 1)					
20. DISTRIBUTION / AVAILABILITY OF ABSTRACT <input checked="" type="checkbox"/> UNCLASSIFIED / UNLIMITED <input type="checkbox"/> SAME AS RPT. <input type="checkbox"/> DTIC USERS			21. ABSTRACT SECURITY CLASSIFICATION Unclassified		
22a. NAME OF RESPONSIBLE INDIVIDUAL MAJ John C. Krysa			22b. TELEPHONE (Include Area Code) (913) 684-2138		22c. OFFICE SYMBOL ATZL-SWV

DD Form 1473, JUN 86

Previous editions are obsolete.

SECURITY CLASSIFICATION OF THIS PAGE

UNCLASSIFIED

OPERATIONAL PLANNING IN THE NORMANDY CAMPAIGN 1944

by

Major John C. Krysa

Infantry

School of Advanced Military Studies
U.S. Army Command and General Staff College
Fort Leavenworth, Kansas

April 1988

Approved for public release, distribution is unlimited.



88-2871

Accession For	
NTIS CRA&I	<input checked="checked" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution /	
Availability Codes	
Dist	Avail and/or Special
A-1	

SCHOOL OF ADVANCED MILITARY STUDIES

MONOGRAPH APPROVAL

Name of Student: John C. Krysa, Major, Infantry

Title of Monograph: Operational Planning in the
Normandy Campaign 1944

Douglas W. Craft Monograph Director
Lieutenant Colonel Douglas W. Craft, M.A.

Leonard D. Holder, Jr. Director, School of
Colonel Leonard D. Holder, Jr., M.A. Advanced Military
Studies

Philip J. Brookes Director, Graduate
Philip J. Brookes, Ph.D. Degree Programs

Accepted the 3th day of May 1988.

ABSTRACT

OPERATIONAL PLANNING IN THE NORMANDY CAMPAIGN 1944,

BY MAJ John C. Krysa, USA.

This monograph examines the planning and preparations for the cross-channel invasion of France by joint and combined forces. It illustrates the dependence of operational maneuver upon operational logistics considerations in a campaign of considerable complexity and uncertainty.

TABLE OF CONTENTS

I.	Introduction	1
II.	Normandy Campaign Planning	3
III.	Operational Level Maneuver and Sustainment .	13
	A. Maneuver	14
	B. Logistics	18
IV.	Conducting the Normandy Campaign	22
V.	Conclusion	30
Appendices	A. Directive to Supreme Commander, Allied Expeditionary Force .	33
	B. Summary of Major Codeword Operations	36
	Endnotes	38
	Bibliography	40

OPERATIONAL PLANNING IN THE NORMANDY CAMPAIGN 1944

1. INTRODUCTION

Operational art involves the application of military force to achieve strategic goals. The application of force requires deliberate planning and organizing units for sequenced action in campaigns or major operations. This monograph examines the operational planning for the Normandy Campaign to execute the cross-channel invasion of France and the conduct of operations once across the assault beaches. Of particular note is the significant role played by logistics at the operational level, especially as a major determinant of maneuver. (*key words*)

The Campaign began with air operations, deception activity, and irregular warfare to weaken the inherent strength of the defense. Then came the invasion itself on 6 June 1944 and the fight to increase the size of the foothold on the European landmass. This course was followed by the maneuvers to breakout from the lodgement, occupy the Brittany peninsula, and pursue the German forces as they fought their way out of France. The campaign came to a close as Allied forces closed on the Seine river on 25 August 1944.

Van Creveld's treatment of the Normandy Campaign begins with the Napoleonic aphorism "War is a barbaric business in which victory goes to the side that knows how to concentrate the largest number of troops at the decisive spot." He quite correctly indicates that once the decisive point is identified it becomes a function of logistics to employ bases, lines of communication, and transport in order to build up a superior force of men and material. Thus the planning for Operation OVERLORD was an exercise in putting a sufficient force into Normandy and maintaining a higher flow of troops and equipment into the invasion area than the enemy.¹

The United States may very well be faced with similar circumstances in the future. It is possible that our strategic interests in future conflicts could require the projection of ground combat forces over great distances to assault territory occupied by an adversary. Regional staging, cooperation with allies, establishment of a lodgement for future operations, and transition from short term resupply activity to operational level sustainment operations are aspects of the Normandy Campaign which could be faced again.

II. NORMANDY CAMPAIGN PLANNING

The heads of state of the allied nations determined the strategic aims of their forces in the global war they were fighting. The decisions regarding invasion of northwest Europe had to take into account national and coalition priorities for all theaters of war. The United States was eager to invade as soon as possible and to carry the fight to the enemy in a Clausewitzian "clash of the two main forces."²

The Soviets wanted the allies to open a second front as soon as possible. This would divert the German focus of attention and effort from Soviet forces in the East. The British sought first to exhaust the Germans by strategic bombing and operations on the periphery of their alliance before conducting a deliberate invasion to battle German forces for the coup-de-grace.³

One task of the Combined Chiefs of Staff was to allocate resources to the various theaters of war and to issue implementing directives to the respective commanders. The political - strategic decision was made to pursue a military strategy of Europe first, Pacific second. The Pacific theater of war was by no means inactive and considerable resources were consumed in it. This was to be a major consideration in the

availability of landing craft and assault vessels. Within the European theater of war, major operations and campaigns in the Mediterranean -- Africa, Sicily, Italy, Southern France -- required sequenced execution with varying resource priorities over time. In fact, the "Europe first" plan was barely honored. The Pacific theater drew off almost forty divisions.

When staffs were formed to begin preparations for the campaign to invade north west Europe the world was a very complex place. Conflict was going on in multiple theaters of operation. Priorities, concepts, and requirements changed frequently. Land, naval, and air forces for the campaign were to come from multiple nations. Authoritative factual data was not readily obtained. The way forces were to be employed, the means to project them, and the structure to sustain them were nebulous issues to be developed.

Initial operational planning for the invasion was performed by a staff without a commander which was known by the acronym of its initial leadership, COSSAC (Chief of Staff to the Supreme Allied Commander.) The staff itself was an unprecedented organization of American and British officers of all branches of service. The essence of its activity was to prepare plans for the invasion -- Operation OVERLORD. Early

concepts for the invasion were revised as plans were analyzed in light of expanding information about allied amphibious experience. In November 1942 the chief planners changed the focus of effort to embrace the notion of concentration. Subsequent efforts planned for a single landing area "capable of being developed into a lodgement for the whole Allied invasion force."⁴ This conceptual shift in the design of the operation was a major determinant of the resulting operational requirements which were met by the plan for Operation OVERLORD.

A 27 JULY 1943 COSSAC report summarized the concept Operation Overlord as follows:

The object of Operation 'OVERLORD' is to mount and carry out an operation with forces and equipment established in the United Kingdom, and with target date 1st May 1944, to secure a lodgement on the continent from which further offensive operations can be developed. The lodgement area must contain sufficient port facilities to maintain a force of some twenty-six to thirty divisions and enable that force to be augmented by follow-up shipments from the United States or elsewhere of additional divisions and supporting units at the rate of three to five divisions per month. ⁵

In addition to the deliberate invasion in 1944, the staff was occupied with planning for other contingencies. The bulk of these were contained under

various cases of Operation RANKIN. This effort was well reasoned but consumed valuable time. RANKIN sought to react quickly to advantageous circumstances should German forces be weakened or withdrawn from France, Norway, or Denmark. One variant planned to introduce allied forces into Germany immediately in the event of a surrender.

As originally conceived, the campaign plan envisioned five phases for Operation OVERLORD. These were articulated in a 1943 COSSAC document. First, the Preliminary Phase would begin immediately to set the conditions for the major offensive in 1944. Its aim was to soften German resistance throughout France while keeping forces away from the intended invasion area. Pressure would be brought to bear by naval and air action, propaganda and psychological operations, sabotage and special operations, and political and economic disruption. Second, the Preparatory Phase would assemble the invasion force and make final strikes against German forces. Its aim would be to concentrate the naval task forces, load assault echelons on ships, marshal follow-on echelons at the ports, and conduct final activities once the invasion was imminent. Effort would be placed on eliminating any remaining German air forces in France and

disrupting the lines of communications and headquarters of mobile reserves. Next would come the Assault Phase. This was the major D-Day offensive and sequence of concentrated air and naval bombardments, airborne assaults, commando actions, and the sea borne landings of forces onto France. Next would be the Follow Up and Build Up Phase. Its aim was to destroy defending enemy forces, expand the beachhead, establish a lodgement with air and sea ports, and increase the combat power of the forces ashore. Lastly would come the Further Operations Phase. This would begin at approximately D+14 after the quick seizure of Cherbourg due to weak resistance or other action in the face of stronger German resistance. It would require decisions from the Supreme Allied Commander, based on the situation before definitive preparations could be made.

The planning dwelled on the invasion itself while plans for the subsequent ground operation were scarce. There seemed to be considerable thought given to combining and sequencing the effects of naval, air, and ground combat power as an invasion force, yet the plan for transition to continental maneuver was incomplete.

Eight major concerns were evidenced in a COSSAC planner's listing of conditions affecting the probability of the operation's success. These

included: surprise of the initial assault, adequate air support, rapid concentration of assault formations, adequate artificial harbors and improvised sheltered waters, favorable force ratios in lodgement, better performance of naval assault forces than previously experienced, reduction of local German fighter aircraft strength, and sustainment of the force over the beach for three months.

A number of fears had to be present in the minds of the Allied Forces senior leadership as they prepared plans for the invasion. The first fear was likely to be stimulated by the recent experiences of Dunkirk. In 1940 British forces had been deployed in an alliance with the modern, trained, well equipped, forces of France with its educated officer corps. Despite their defensive plans and superior strength, they were both defeated and humiliated when the French ally crumbled and the British Army was driven into the sea. A second fear had to have been the possibility of resorting to stagnant but costly trench warfare if the Allied lodgement was contained by superior Axis forces. The futility and senseless loss of life in WW I battles of attrition had to be in the thoughts of the planners as they looked at building up forces in a lodgement. The last major fear had to have been the implication of

failure. The British had suffered such losses throughout the world that the possibility of major casualties and extensive destruction of the last remaining Army of the Empire would be devastating.

The major planning emphasized the conduct of the first four phases. It was not until as late as 11 April 1944 that the Combined Chiefs of Staff directed SHAEF to begin plans for operations subsequent to the seizure of channel ports and the establishment of the lodgement. This directive defined the "Heart of Germany," which was specified as the objective in their earlier directive to the Supreme Allied Commander, as the Ruhr industrial area. (See Appendix A for the complete text of this directive.) The concept of operations suggested by the Combined Chiefs of Staff called for the first crossing the Seine and securing the Somme with British forces, next enveloping Paris with American forces moving south then northeast, and finally a parallel US-UK advance into the Ruhr on a broad front.⁶

General Eisenhower had already directed the formation of a joint planning staff to develop operations referred to as POST-NEPTUNE or POST-OVERLORD plans. They first met in mid-March 1944 to develop the situation as they assumed it would be on D + 190 before

selecting the areas for future operations and outlining the concept for striking into Germany. Almost surprisingly, General Eisenhower did not direct his subordinate commanders to examine branches for the post-Neptune phase until late May 1944. His 24 May guidance to planners regarding the breakout operation called for using an armor force to break through the beachhead and link up with airborne forces in order to capitalize on Allied air superiority.⁷

The plans to achieve favorable force ratios in the lodgement were extensive. Five divisions would be landed in the initial seaborne assault with three airborne divisions landed farther inland to secure critical bridges, causeways, and road junctions leading into the beachhead. The deception of Operation FORTITUDE would endeavor to delay or limit the number of mobile armored forces the Germans would commit to a counterattack of the invasion site. Operations in the Mediterranean Theater and on the Eastern Front would limit the availability of German forces for reinforcing the theater of operations. Operation POINT BLANK bombing would disrupt fuel production and the transportation network limiting the capacity of the Germans to move forces. Most significantly, the Allies had to increase the strength of the force in the

lodgement quickly and continually . (See Appendix B for brief summaries of major codeword operations.)

The analysis of what was within the realm of the possible was within the purview of the logistician. Three major factors are evident. First is the suitability of the invasion beaches. Selection criteria involved physical characteristics influencing assault landing craft, ship-to-shore operations, protected shoreline in conjunction with artificial harbors/breakwaters, and inland road network. Second is the availability of landing craft. The number and type of assault, transport, and support vessels to carry the varied echelons to France and sustain the force over the beach would determine the strength of the lodgement. Third is the availability of deep water ports. The rapid seizure and reopening of channel ports in proximity to the landing beaches would enable expansion of the lodgement, increase the size of the force, and sustain Allied strength in north west Europe.

The physical invasion of France was, in and of itself, a strategic end. The projection of combat forces into the German occupied territory of northwest Europe was but one phase of the campaign but it achieved a strategic aim. Germany was now faced with a

two front war on its home continent. Threat of attack and the potential for an offensive was replaced by forces on the ground. The impact of this event was felt in the physical, moral, and cybernetic domains. No longer could Germany make strategic level decisions about the global conduct of war with probability of attack as a factor. German plans, limited resources, and time had to be dedicated to counter the allied invasion while still facing the probability of other offensive action. Getting four corps ashore over five beaches reinforcing the landings, linking the invasion forces into a single beachhead and sustaining their combat power was not a sure thing. To achieve the necessary strategic aim, getting there and staying there, was the object of the planners efforts.

The operational planners were involved in preparations far more involved than that of a continental offensive. As Huston notes "In the development of the plans for the great invasion, logistics dominated the definition of objectives, the choice of landing sites, the size of the assault force, and plans for building up the initial forces and pushing inland."8

III. OPERATIONAL LEVEL MANEUVER AND SUSTAINMENT

The term "operational" is not definitively related to a specific echelon of command or level of organization. It is more appropriate to the linking of tactical missions to strategic aims. Simpkin offers the following criteria for distinguishing "operational" concepts, plans, or activity:

- have a mission lying at one remove, and only one remove, from an aim which be be stated in politico-economic (strategic) terms;

- be a dynamic, closed-loop system, characterized by speed and appropriateness of response;

- consist of at least three components, one of which reflects the opponent's will;

- be synergetic -- that is, its whole must have an effect greater than that of the sum of its parts;

- be self-contained within the scope of its mission.

Thus, the operational level most appropriately relates to activity in campaigns or major operations which directly contribute to achievement of a strategic aim. In the recent draft field manual, Large

Unit Operations, five essential functions are described which enable an operational level commander to influence the outcome in combat -- intelligence, maneuver, fires, sustainment, and deception.¹⁰

At the operational level the object of the military planner must be to achieve advantage over the enemy with a combination of functions. These may include the employment of a variety of joint force or single service units to gain the advantage using operational fires, deception, special operations, or psychological operations. For our purposes just two doctrinal functions, operational maneuver and operational sustainment, will be examined.

A. Operational Maneuver

"Maneuver is the movement of forces in relation to the enemy to secure or retain positional advantage."

FM 100-5

At the operational level the object of maneuver must be to achieve a positional advantage over the enemy. This advantage may be in the physical, moral, or cybernetic domains.

Our doctrine tends to focus on achieving effects in the physical domain. FM 100-5 defines operational maneuver as "seeking a decisive impact on the conduct

of a campaign. It attempts to gain advantage of position before battle and to exploit tactical successes to achieve operational results."¹¹

These results are doctrinally obtained by concentrating combat power against the enemy center of gravity or source of strength to unbalance it. While our doctrinal description of the operational level concept of center of gravity includes abstract notions like the cohesion of units and the mind of the commander, our doctrine tends to dwell on the more recognizable physical aspects of power.¹²

Clausewitz' perspective on maneuver in campaigns can be described as the ways to bring the means of a force to bear, especially in the attack, in order to achieve a desired end. While maneuver is a component of both offense and defense "its nature is more closely related to attack than to defense."¹³ Certainly initiative is the prerogative of the attacker and thus the opportunity for first maneuver goes to the offense. However, the initiative may be wrested from the attacker and the ways to achieve positional advantage through maneuver may well favor the defender.

At what we would doctrinally relate to maneuver at the operational level, Clausewitz identifies four elements in pairs of opposites. They are outflanking

the enemy or operating on interior lines and concentrating or extending forces. These factors relate to combinations of mobility and concentration. They are methods or ways of creating and seizing opportunities to bring physical power to bear against an enemy.¹⁴

Sun Tzu writes "what is difficult about maneuver (translated as the contest of armies as each strives to gain advantageous positions) is to make the obvious route the most direct to turn misfortune to advantage."¹⁵ In this regard Sun Tzu reinforces the need for preparedness to take advantage of mistakes made by enemy forces. His chapter on maneuver includes the need to seek moral advantage not only by position but by deceptive troop movements, timing, audible and visual signals, and dispositions which allow an enemy force to flee in disorder.¹⁶ These notions emphasize positional advantage to inflict maximum disruption in the moral and cybernetic domains.

From a physical perspective, the purpose of operational maneuver is to concentrate force -- decisive force -- against an enemy. Success is achieved by selecting the proper combinations. In modern warfare, operational maneuver creates enemy weakness or takes advantage of enemy weakness by

exploiting the combined effects of ground, air, and naval forces, supported by the effects of deception and operational fires, and special operations forces. To do this operational maneuver brings combat power against decisive points to upset the enemy's center of gravity. These decisive points may require emphasis on concentrating combat power by massing resources in time and space against one point to achieve superiority, or by emphasizing unexpected movements and sequential actions to disrupt the enemy's balance and deny freedom of action before striking with relative superiority.

From an operational planner's perspective, one must be concerned with combining types of forces so that they complement each other in the overall effect on the enemy. The relative strengths and limitations of airborne, of light forces, mechanized forces, and heavy armor forces must be considered in the design of maneuver. Their mobility differential is a positive factor to be exploited in presenting the enemy with the unexpected. Such combinations, coupled with appropriate fires, attack the moral and cybernetic domains. Properly selected objectives for each type of force can unbalance the enemy, then, rapid movement to achieve relative physical superiority can defeat a larger force.

B. Operational Logistics

"Operational sustainment comprises those logistical and support activities required to sustain campaigns and major operations within a theater of operations." FM 100-5

At the operational level, the object is the generation of combat power, or the means employed to achieve an end. Logistics is far more than supplying a force and providing maintenance support to tactical units. It deals with the deliberate allocation of fixed or limited resources to transport and sustain the combat power of tactical formations. The newest support doctrine identifies four factors of special note in a description of operational level sustainment. They are:

Lines of support, either interior for fewer transportation requirements, shorter distances, and large support bases, or exterior for redundant transportation assets, multiple routes, and smaller dispersed support bases.

Staging forward or rearward from established bases, within or outside the area of operations, and by phase, tempo, or event.

Altering lines of communication to exploit enemy

vulnerabilities or correct friendly weakness and preparing to displace facilities while accommodating surge requirements or managing peak movement demands.

Sustainment priorities to assign scarce resources to the most vital entity of an operation, and shifting priorities by category and level with regard to risks and changing circumstances.¹⁷

Properly, logistical plans are prepared to support the operational commander's concept of the operation. The preparations for sustainment are intended to generate the means to accomplish the desired ends of the operational concept. The anticipated combat power requirements should determine the concept for support.

Limited capacity of any of the various factors comprising logistics may serve to limit the possible courses a commander can pursue. Indeed, the capabilities to generate and sustain combat power can be major constraints and restraints for the operational planner. "At the campaign planning level, sustainability can be a dominant factor in determining the nature and tempo of operations." ¹⁸ The design of operations must also balance the consumption of current

activities with the build-up for future operations. All the while the design must consider the possibility of sudden changes. Adjustments may mandate slowing the rate at which combat units are introduced to a theater of operations in order to improve the logistics posture of those forces already present, or surging, to meet greater requirements at a future time.

Some ideas advanced by Professor James Schneider help to place operational logistics in perspective. He posits that an operational artist works with tools and substance. The primary tools "are the forces themselves," and logistics provides "the operational substance for use in war."¹⁹ He views operational logistics as being composed of sustainment to supply, shelter, and maintain forces, and transportation to move forces and material. In operational planning two parallel logistical elements must be considered. The first is base of operations; a concept in the realm of the sustainment function. The second is lines of communication, subdivided into lines of support for sustainment, concepts which relate to the transportation function.²⁰

Campaign planning must include consideration of a range of logistical factors, especially when forces of different services or nations are collectively

employed. Analysis of operational sustainment should determine the capacity of the total force in supply, transportation, maintenance, construction, medical, and personnel functional areas. The propriety, ability, and willingness to cross service or national lines in common sustainment endeavors must be determined before the operation.

IV. CONDUCTING THE NORMANDY CAMPAIGN

Operation OVERLORD was an event of unprecedented magnitude. Simply getting a force into France and not being beaten back into the English Channel was the achievement of a strategic aim. Seizure and occupation of terrain was the object of the campaign; destruction of the enemy force could come later. Once ashore, sustaining and building up the force was the major endeavor.

The limited capacity to sustain combat power by logistics operations across the beaches determined the initial objectives and timetable for operational maneuver. The inability to secure operable deep water ports was a major detriment to the timetable for expanding the lodgement. By the end of June the Allies were 30% behind schedule for anticipated supply build up and 35% behind for vehicle transportation. The much needed port of Cherbourg was not in service and requirements for cargo discharge facilities far exceeded what was available. Planners knew 200 ships from the US were scheduled to reach Europe in July and again in August, yet, end of June estimates projected port capacity on the continent to be 100 for July and 125 for August. In actuality, 76 ships in August and

95 in September were discharged directly onto Europe. Transloading in British ports from ocean-going ships to coastal freighters took valuable time. By the end of September 180 ships floated idly off shore waiting to discharge their much needed tonnage. Shallow harbors and off shore transfers to lighterage were worked to capacity to speed the turn around of shallow draft transports between France and the UK.²¹

The lack of success in seizing seaports disrupted the orderly and necessary increase of combat units. Deep water ports were operational objectives. Their seizure was necessary for two reasons. First, sustainment of the assault and follow-up divisions depended on their capture. This would prevent allied defeat in the short term. Second, expansion of the lodgement was essential for future operations. The build up and throughput capacity were part of setting the conditions for future operations.

It was faulty operational design, however, to depend upon facilities which would most certainly be destroyed by the Germans. The defenders systematically demolished and damaged the harbor equipment and docks. Thus the inability to expand the size of the force ashore slowed the timetable for expanding the area of the lodgement. The sooner a viable force was put into

France and a sufficient logistical base established on the continent, the sooner the Allies could shift their operational maneuver objectives from terrain seizure to the defeat of enemy forces.

Detailed air operations planning paid substantial dividends from a logistical standpoint. Operations CROSSBOW and POINT BLANK had a distinct role in creating the desired conditions for the invasion. CROSSBOW bombing protected staging and marshalling areas in the UK from rocket attack. Direction of strategic bombing assets was given to General Eisenhower in April in order to incorporate the effects of Operation POINT BLANK with desired conditions for OVERLORD. Decisions to bomb petroleum production facilities under the Oil Plan inadvertently served to draw German fighter aircraft away from Normandy. German efforts to defend this essential industry from further damage only yielded air superiority to the Allies at the invasion site. The target priority was shifted to the Transportation Plan and bombing of railroad facilities began in earnest, particularly those which could be used to reinforce Normandy rapidly. Significant damage came from attacks by Allied tactical air forces to destroy bridges over the Seine, Oise, and

Meuse Rivers in an attempt to isolate the invasion area.²²

The results of these attacks on logistical targets had two effects. The first was quite positive in that essential German military resupply and movement was severely curtailed. "...Rail traffic since the invasion had been 90 percent paralyzed. No transport at all had come into the (Seventh German) army area from the east."²³ The second was that once German forces were committed towards Normandy they had to take a time-consuming indirect route and as a result were more vulnerable to air attack while in transit. Thus the effects of operational fires upon enemy logistical targets enabled the allies to gain advantage over the enemy. The dimensions of time and space were evident as the defenders forces were drawn away or kept some distance away during the time it took to build up allied combat power in the lodgement.

Logistical factors determined the size and placement of British and US assault forces. As men and equipment arrived in the UK under BOLERO units grew in size. Training facilities, camps and marshaling areas were built and occupied. Depots and supply dumps were constructed and tons of material were stock piled in them. In general, the majority of US forces occupied

areas on the western side of England. They embarked upon vessels of the Western Naval Task Force which assembled in ports on the west end of the English Channel coast and south west Atlantic coast. British units marshaled on the south and eastern regions of England, to either side of London. British and Canadian assault forces embarked upon vessels of the Eastern Naval Task Force on the east end of the English Channel coast and south east coast of the North Sea.

"Altogether, the invasion fleets would number some 5,000 ships, 702 of them warships, crossing the English Channel in a phalanx ten lanes and thirty kilometers wide."²⁴ Once transport and landing vessels had delivered the assaulting divisions and follow-up assault corps they would sortie back to England for the follow-up corps units and repeat the trip again later to move supplies and equipment. The sheer volume of men and material to be transported demanded simplicity of execution. In other words, national forces which staged in the west UK would attack the west side of the invasion area. To change staging areas, embarkation ports, or cross sea lanes enroute to France would be impossible. As a result the British 2d Army was faced with Caen in the eastern portion of the landing area with its open tank country beyond, while the US 1st

Army and follow on 3rd Army would land opposite the compartmented low mobility terrain of the Bocage.

The difference in national force composition, the volume of US forces in the pipeline to Europe, and the inability of the British to suffer casualties because of severe manpower limitations would make assignment of the US to the east and the British to the west logical courses of action. Once the actual invasion beaches were selected and passed to the appropriate planners it was too late to reassign US forces to objectives in the zone near Caen for which they were best suited to take advantage of the enemy and terrain. Thus the initial operation and strategic level logistics activity undertaken to accomplish the required buildup of combat power in England prior to the invasion limited the subsequent employment of maneuver forces once they were projected ashore.

Terrain beyond the initial beachhead which would restrict German counter attacks during the assault also restricted the possibilities for allied breakout and expansion. Movement was far more difficult than expected. Hedgerows presented difficult obstacles to negotiate and required close tactical cooperation between infantry and armor forces. As a result greater reliance was placed on firepower to reduce enemy strong

points before movement could resume and greater amounts of ammunition were expended. The light infantry forces of the US assault divisions were not equipped to maneuver rapidly inland to link up with the airborne forces holding key bridges, causeways, and road transportation hubs. This low mobility factor made subsequent maneuver during the breakout difficult also.

General Montgomery had decided on 20 June that the British offensive could not begin until 25 June because the British VIII Corps had not yet been transported to the continent. A sudden, violent storm damaged the artificial harbors and over-the-shore discharge of equipment took longer to accomplish. Maneuver could not be undertaken until shortfalls in logistical functions to transport combat units and sustainment capacity were overcome. Transportation limitations were causing delays in operations.²⁵

Branches to the post-Neptune phase took the form of operations GOODWOOD, LUCKY STRIKE, and COBRA. LUCKY STRIKE plans called for reliance on over-the-shore sustainment while combat forces maneuvered against Brittany ports but the loss of the Mulberry artificial harbors made this unworkable. COBRA and GOODWOOD were launched in July once sufficient forces were built up. After the breakout all forms of improvised

transportation and sustainment were employed to maintain the combat power of the maneuver forces.

The inability to sustain the forces conducting an exploitation after the breakout brought operational maneuver to a halt at the Seine. The proper tactical employment of certain infantry, air defense, and engineer units was subordinated to the logistical function of sustaining combat power of units engaged in the exploitation. Despite stripping non-essential units of trucks to haul much needed supplies the rapidly moving forces could not be sustained further. Until supplies were built up and emphasis given to rebuilding the combat power of committed units, further maneuver against the enemy force could not be undertaken.

V. CONCLUSION

The Normandy Campaign was a success -- it achieved its aims. It also shows some problems of planning at the operational level when traditional biases override clear thinking. Operational logistics were thoroughly planned but operational maneuver was not expected.

Basic analysis of what type of force is required to accomplish the operational mission would have given some different solutions than those selected. The US bias towards dismounted infantry did not fit the requirements for operational maneuver. Once ashore, the assault force needed to maneuver quickly through difficult terrain to link up with airborne forces. This would dictate a mobile combined arms force capable of rapid and deep maneuver. Also, a greater degree of mechanization and armor protection was required to clear beach obstacles, destroy fortified positions, and move inland. Multiple supply class packets seem reasonable for initial resupply needs at the start of the invasion -- building a Communications Zone hierarchy on a beach does not.

The opportunity for decisive battle and the destruction of the mass of the enemy force was lost. the Falaise pocket was the perfect opportunity to

exhibit operational maneuver, yet anticipated problems with converging allied forces allowed the enemy to escape to fight again.

The rapid pursuit of a fleeing enemy should have been anticipated. Early plans called for the rapid introduction of forces into Europe under RANKIN yet the US 3d Army lacked the logistical basis to exploit a large scale enemy withdrawal. Such a maneuver to achieve positional advantage was within the spirit of the drive into Germany but was not properly resourced.

The campaign was phased so as to allow for an operational phase at the Seine River before moving on. This envisioned a strategy of attrition. When the opportunity for annihilation arose, the operational logistics could not sustain the necessary maneuver. The necessary combat power could not be projected any farther.

Repeatedly in this campaign the elements of operational logistics played a major role as a determinant of operational maneuver. The achievement of the desired strategic aims in a campaign involving the projection of military forces across great expanses of ocean and sustaining them from the sea will probably

always be disproportionately focused on logistics endeavor.

"In its broadest sense virtually anything that makes a physical contribution to combat power can be considered to belong in the realm of logistics."

Professor Schneider

APPENDIX A

Directive to the Supreme Allied Commander, Allied Expeditionary Force.

The following is the complete text of combined Chiefs of Staff document 304-12 dated 12 February 1944. It contains the often cited 3 sentence task statement used as an example of simplicity in a mission statement. The eight paragraph text outlines responsibilities for major concepts in general terms. Considerable complexity is represented in these broad issues. International relations and sustainment considerations are major theme throughout.

DIRECTIVE TO SUPREME COMMANDER, ALLIED EXPEDITIONARY FORCE

1. You are hereby designated as Supreme Allied Commander of the forces placed under your orders for operations for liberation of Europe from Germans. Your title will be Supreme Commander Allied Expeditionary Force.

2. Task. You will enter the continent of Europe and, in conjunction with the other United Nations, undertake operations aimed at the heart of Germany and the destruction of her armed forces. The date for entering the Continent is the month of May, 1944. After adequate channel ports have been secured, exploitation will be directed towards securing an area that will facilitate both ground and air operations against the enemy.

3. Notwithstanding the target date above you will be prepared at any time to take immediate advantage of favorable circumstances, such as withdrawal by the enemy on your front, to effect a re-entry into the Continent with such forces as you have available at the time; a general plan for this operation when approved will be furnished for your assistance.

4. Command. You are responsible to the Combined Chiefs of Staff and will exercise command generally in accordance with the diagram at Appendix. Direct communication with the United States and British Chiefs of Staff is authorized in the interest of facilitating your operations and for arranging necessary logistic support.

5. Logistics. In the United Kingdom the responsibility for logistics organization, concentration,

movement and supply of forces to meet the requirements of your plan will rest with British service Ministries so far as British Forces are concerned.

So far as United States Forces are concerned, this responsibility will rest with the United States War Navy Departments. You will be responsible for the coordination of logistical arrangements on the continent. You will also be responsible for coordinating the requirements of British and United States forces under your command.

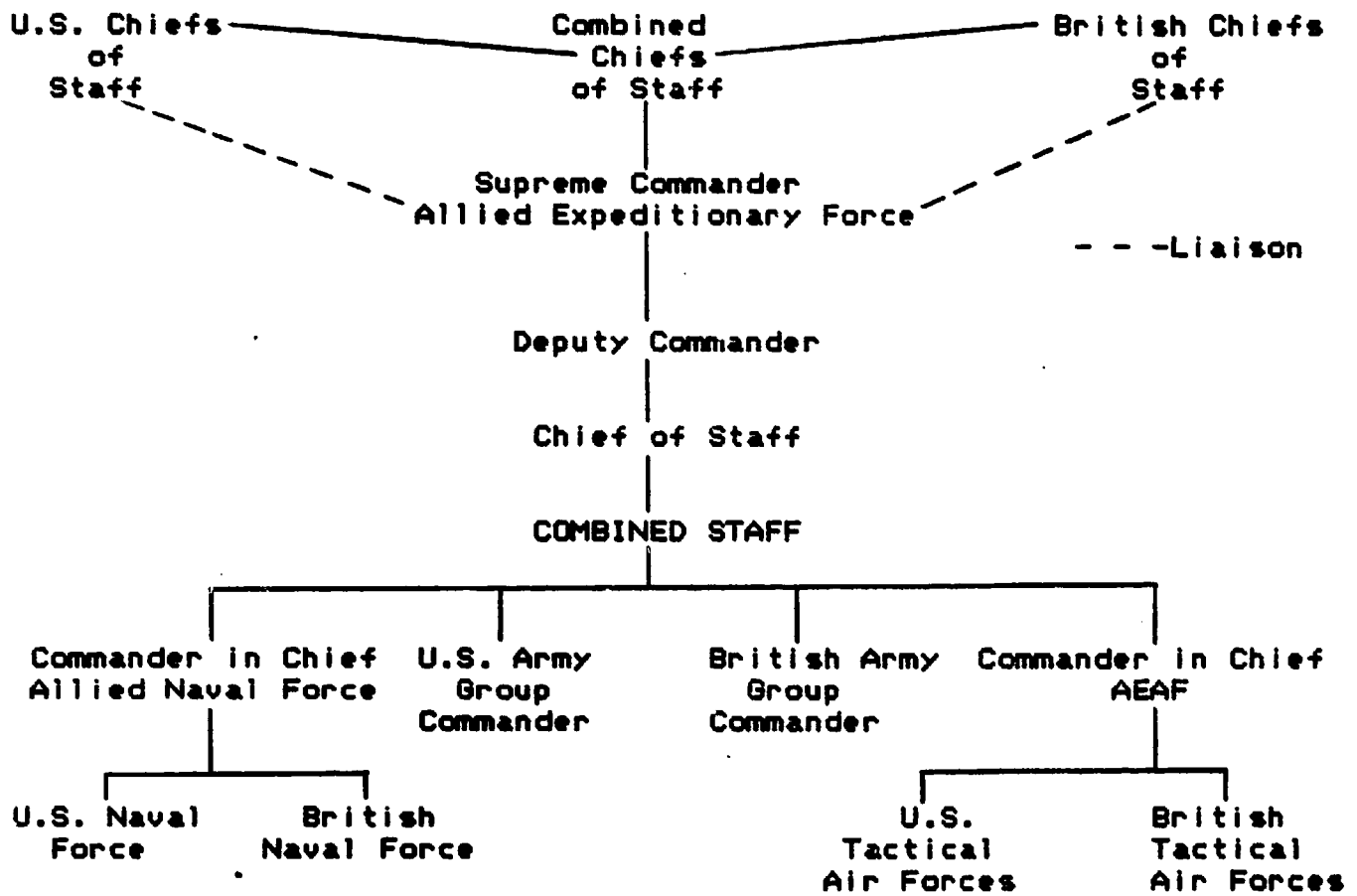
6. Coordination of operation of other forces and agencies. In preparation of your assault on enemy occupied Europe, Sea and Air Force agencies of sabotage, subversion and propaganda, acting under a variety of authorities are now in action. You may recommend variation in these activities which may seem to you desirable.

7. Relationship to United Nations Forces in other areas. Responsibility will rest with the Combined Chiefs of Staff for supplying information relating to operations of the Forces of the U.S.S.R. for your guidance in timing your operations. It is understood that the Soviet Forces will launch an offensive at about the same time as OVERLORD with the object of preventing the German forces from transferring from the Eastern to the Western front. The allied Commander in Chief, Mediterranean Theater, will conduct operations designed to assist your operation, including the launching of an attack against the south of France at about the same time as OVERLORD. The scope and timing of his operations will be decided by the Combined Chiefs of Staff. You will establish contact with him and submit to the Combined Chiefs of Staff your views and recommendations regarding operations from the Mediterranean in support of your attack from the United Kingdom. A copy of his directive is furnished for your guidance.

The Combined Chiefs of Staff will place under your command the forces operating in Southern France as soon as you are in a position to assume such command. You will submit timely recommendations compatible with this regard.

8. Relationship with Allied Governments - the re-establishment of Civil Governments and Liberated Allied Territories and the administration of enemy territories. Further instructions will be issued to you on these subjects at a later date.

APPENDIX
CHAIN OF COMMAND



APPENDIX B

SUMMARY OF MAJOR CODEWORD OPERATIONS

ANVIL: Initial Allied plan to invade southern France, in conjunction with OVERLORD, to seize Mediterranean ports and assault another strategic flank of the Axis.

BODYGUARD: Deception and counterintelligence plan for protecting OVERLORD plans.

BOLERO: Staging operations to move forces from US and UK to buildup combat power for offensive action in northwest Europe.

COBRA: US originated plan for allied expansion of the Normandy beachhead in July 1944 with British and Canadian attacks at Caen to draw the main effort of German defense followed by US 1st Army attacks to pass thru VII Corps and subsequently 3rd Army on a narrow front near St. Lo. Carpet bombing by strategic air forces preceded the ground assault.

CROSSBOW: Operations to collect intelligence on German rockets and other secret weapons followed by efforts to destroy production and launch facilities.

DRAGOON: Allied operation in AUG 1944 to invade southern France directly following OVERLORD landings. Competed for landing and assault craft with northern France invasion and for combat units and logistical support with Italian operation.

FORTITUDE: Allied deception effort to conceal the OVERLORD invasion site, forces, and date.

GOODWOOD: British I Corps and Canadian II Corps operation to capture Caen and pin/draw German forces to the area in July 1944 in support of a US VII Corps attack (Cobra) to break out of the Normandy beachhead.

HUSKY: Allied operation to invade Sicily in July 1943, following AXIS defeat in North Africa, as the first step in the Italian Campaign. Strategic value by drawing German forces from Eastern Front and northwest Europe.

LUCKY STRIKE: Allied plan to go west to Brittany ports after a breakout from Normandy beachheads, relying on

sustainment from over the shore logistics and Cherbourg port.

NEPTUNE: Assault plan for OVERLORD which emphasized naval operations by two task forces to land five combat divisions. Also, the cover designation adopted in 1943 for OVERLORD plans which specified the date and exact location of the invasion.

POINT BLANK: Combined strategic bombing operation agreed upon in January 1943 to destroy or disrupt German industry, armed forces, economy, and morale. Primary objectives varied between U-boat, aircraft production, transportation, and petroleum industry targets.

RANKIN: Plans developed pursuant to 1943 COSSAC directive to prepare for sudden return of Allied forces into the Continent of Europe if effective Axis resistance ended. CASE A for invading Cotentin peninsula in German military or economic collapse. CASE B for German withdrawal from major areas or regions of Europe. CASE C for German surrender with major forces still intact.

ROUND-UP: Proposed 1942 US plan for Allied invasion of France between LeHarve and Boulogne in April 1943. Second operation in a three phased strategy beginning with Bolero to build up forces in the UK followed by Sledgehammer to seize Cotentin peninsula.

SICKLE: Staging of US air forces in the UK during 1942-43 for the air offensive against Germany.

ENDNOTES

1. Martin Van Creveld, Supplying War, (New York: Cambridge University Press, 1977) p. 206.
2. Carl von Clausewitz, On War, edited and translated by H. Howard and P. Paret (Princeton University Press, 1976) p. 545.
3. William Betson, "Centers of Gravity, Lines of Operation, and the Normandy Campaign." (SAMS Monograph, 1987) Chapter 3.
4. Gordon Harrison, Cross Channel Attack, US Army in World War II. (Washington D.C., Office of the Chief of Military History, 1951) p. 56.
5. COSSAC. "Digest of Operation Overlord." [(43)32, 27 JUL 43 CARL Document # MN 1038] p. 1.
6. "SHAEF Directive No. 7 to Commander-in-Chief 21 Army Group, Commanding General First US Army Group." (8 FEB 44 CARL Document #N15823) p. 11.
7. Harry C. Butcher, My Three Years With Eisenhower, (New York, : Simon and Schuster, 1946) p. 548
8. James A. Huston, The Sinews of War: Army Logistics 1775-1953, Army Historical Series. (Washington D.C.: Office of the Chief of Military History, 1966) p. 523.
9. Richard E. Simpkin, Race to the Swift, (London: Brassey's Defence Publishers, 1986) p.24.
10. FM 100-6, Large Unit Operations, (1987 Draft), pp. 3-7.
11. FM 100-5, Operations, (1986) p. 12.
12. Ibid. pp. 129-180.
13. Op. cit., Clausewitz, p. 541.
14. Op. cit., Clausewitz, pp. 541-542.
15. Sun Tzu, The Art of War, (New York: Delacorte Press, 1983) p. 102.
16. Ibid, pp. 102-110.

17. FM 100-10, Combat Service Support, (1988) pp.2-4.
18. Op. cit., Large Unit Operations, (1987) pp.3-18.
19. Schneider, James, "The Theory of Operational Art", SAMS Theoretical Paper # 3, (1988) p.22.
20. Ibid, pp.22-25.
21. Robert W. Coakley, Global Logistics and Strategy, Army Historical Series. (Washington, D.C.: Office of the Chief of Military History, 1968) pp. 385-387.
22. Op. Cit., Harrison, pp. 221-228.
23. Ibid, p. 408.
24. Russell Weigley, Eisenhower's Lieutenants, (Bloomington: Indiana University Press, 1981) p. 71.
25. Mary Williams, Chronology 1941-1945, (Washington, D.C.: Office of the Chief of Military History, 1960) pp. 214-216.

BIBLIOGRAPHY

Books

- Bradley, Omar N. A General's Life. New York: Simon and Schuster Inc., 1983.
- Bryant, Arthur. Triumph in the West. Garden City, N.Y.: Doubleday, 1959.
- Butcher, Harry C. Capt USNR. My Three Years With Eisenhower. New York: Simon and Schuster, 1946.
- Clausewitz, Carl von. On War. Edited and translated by M. Howard and P. Paret, Princeton: Princeton University Press, 1976.
- Coakley, Robert W. and Leighton, Richard M. Global Logistics and Strategy 1943-1945. US Army in World War II. Washington, D.C.: Office of the Chief of Military History, 1968.
- D Este, Carlo. Decision in Normandy. London: William Collins, 1983.
- Eisenhower, David. Eisenhower at War, 1943-45. New York: Random House, 1986.
- Hamilton, Nigel. Master of the Battlefield: Monty's War Years, 1942-1944. New York: McGraw Hill, 1983.
- Harrison, Gordon. Cross Channel Attack. U.S. Army in World War II. Washington, D.C.: Office of the Chief of Military History, 1951.
- Hastings, Max. Overlord: D-Day and the Battle for Normandy. New York: Jove Publications, 1984.
- Huston, James A. The Sinews of War: Army Logistics 1775-1953. Army Historical Series. Washington, D.C.: Office of the Chief of Military History, 1966.
- Ingersoll, Ralph. Top Secret. New York: Harcourt, Brace and Company, 1946.
- Keegan, John. Six Armies in Normandy. New York: Viking Press, 1982.

Montgomery, Bernard, Field Marshal. Normandy to the Baltic. London: Hutchinson & Co. LTD., 1947.

Pogue, Forrest. The Supreme Command. U.S. Army in World War II. Washington, D.C.: Office of the Chief of Military History, 1954.

Ruppenthal, R. Logistical Support of the Armies. Washington D.C.: OCMH, 1954.

Simpkin, Richard E. Race to the Swift. London: Brassey's Defence Publishers, 1986.

Sun Tzu. The Art of War. New York: Delacourt Press, 1983.

Van Creveld, Martin von. Supplying War. New York: Cambridge University Press, 1977.

Weigley, Russell F. Eisenhower's Lieutenants. Bloomington: Indiana University Press, 1981.

Williams, Mary H. Chronology 1941-1945. U.S. Army in World War II. Washington, D.C.: Office of the Chief of Military History, 1960.

Wilmont, Chester. The Struggle for Europe. New York: Harper and Brothers, 1952.

Reports, Monographs, and Government Publications

Betson, William. "Centers of Gravity, Lines of Operation, and the Normandy Campaign." SAMS Monograph, 1987.

COSSAC. "Digest of Operation Overlord." COSSAC Report (43)32, 27 JUL 43. CARL Document #MN1038.

COSSAC. "Operation Overlord." COSSAC Report (43) 28, Parts I and II, 15 JUL 43, CARL Document #N7370B.

COSSAC. "Operation Overlord." COSSAC Report (43)28, Appendices A-X, 15 JUL 43, CARL Document #N7370B.

Nichols, Howard V. "Operational Level Logistics: An Examination of U.S. Army Logistical Doctrine for the Operational Level of War." SAMS Monograph, 1986.

- Richardson, Sterling. "The Normandy Campaign: Firepower At the Operational Level." SAMS Monograph, 1987.
- Schneider, James. "The Theory of Operational Art." SAMS Theoretical Paper #3, 1988.
- SHAEF. "SHAEF Directive No. 7 to Commander-in-Chief 21 Army Group, Commanding General, First US Army Group." 8 FEB 44, CARL Document #N15823.
- US Army. "Chart-Maps for British Assault Beaches, Operation OVERLORD." Intelligence Division, Office of the Chief Engineer. ETO U.S. Army, CARL Document #N7374B.
- US Army. "Chart-Maps for OMAHA Beach, Operation OVERLORD." Intelligence Division, Office of the Chief Engineer, ETO U.S. Army, CARL Document #N7374E.
- US Army. "Logistics of Overlord." by COL H.W. Schull, CGSS, 8 JUL 46, CARL Document #R13587.
- US Army. Old Look-New Subject: The Operational Level of War. Edited reprint of "Lessons from the Past for the Present." by COL G.F.R. Henderson, 1905, Carlisle Barracks, PA: US Army War College, 1986.
- US Army. "Summary of Directives - Operation Overlord" Compendium of Combined Chiefs of Staff, COSSAC, and SHAEF Major Directives APR 43-JUL 44 by COL E.H. McDaniel, GSC, CARL Document #N15823.
- US Army. 100-5 Operations. 1986.
- US Army. FM 100-6 Large Unit Operations. Coordinating Draft, Ft. Leavenworth, KS, 1987.
- US Army. FM 100-10 Combat Service Support. 1988.
- US Army. FM 100-16 Support Operations: Echelons Above Corps. 1985
- US Army. The Principles of Strategy for an Independent Corps or Army in a Theater of Operations. by Command and General Staff School 1935-1936, reprinted Carlisle Barracks, PA: US Army War College, 1983.

War Department. "The Administrative and Logistical
History of the ETO." Historical Documents of
WWII, Office of the Adjutant General, 1946, CARL
Document #N1013.